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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,861	11/08/2001	Daniel C. Edelstein	FIS9-2001-0156	2803

7590 01/20/2004

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EXAMINER	
FULLER, ERIC B	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/005,861	EDELSTEIN ET AL.	
	Examiner	Art Unit	
	Eric B Fuller	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 12 November 2003.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-19 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Terminal Disclaimer

The terminal disclaimer filed on November 12, 2003, disclaiming the terminal portion of any patent granted on this application that would extend beyond the expiration date of US 6,147,009, has been reviewed and is NOT accepted.

> The person who signed the terminal disclaimer is not recognized as an officer of the assignee, and he/she has not been established as being authorized to act on behalf of the assignee. See MPEP § 324.

An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321(b) and/or (c).

It would be acceptable for a person, other than a recognized officer, to execute a terminal disclaimer, provided the record for the application includes a statement that the person is empowered to sign terminal disclaimers and/or act on behalf of the organization.

Accordingly, a new terminal disclaimer that includes the above empowerment statement will be considered to be executed by an appropriate official of the assignee. A separately filed paper referencing the previously filed terminal disclaimer and containing a proper empowerment statement would also be acceptable.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Grill et al. (US 6,147,009).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Grill teaches a process of forming a hydrogenated oxidized silicon carbon film (column 4, lines 65-66) by PECVD (column 5, line 19). The reference reads on the applicant's precursors (column 3, lines 15-30), temperature (column 3, lines 30-35), annealing (column 3, lines 10-15), parallel plate reactor (column 3, lines 1-5), carrier gases (column 6, line 64), flow ratios (column 6, lines 25-35), and dielectric constant (column 6, line 12). The reference teaches that the oxidizer source is "at least one member selected from the group consisting of hydrogen, oxygen, germanium, nitrogen and fluorine containing gases" (column 10, lines 59-62). Thus, the reference anticipates

using oxygen, by itself, as the oxidizer. Using oxygen as the only oxidizing source reads on the applicant's limitation of "substantially free of nitrogen".

Claims 1-5 and 7-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Loboda et al. (US 6,159,871).

Loboda teaches a method of depositing a HSiOC film by PECVD (abstract). Methylsilane may be the precursor (column 2, line 57). The temperature is within the applicant's range (column 3, line 26). The dielectric constant of the resulting film is within the applicant's range (tables). The process is performed in a parallel plate reactor (column 4, lies 45-50). Argon may be used as a dilutent gas (column 3, lines 13-15). The oxidizer flow rate is within the applicant's range (column 3, lines 4-10). The annealing step is taught (tables). The reference teaches that the "oxygen providing gases include, but are not limited to air, ozone, oxygen, nitrous oxide, and nitric oxide, preferably nitrous oxide" (column 3, lines 1-5). Thus, the reference anticipates using oxygen only. Using oxygen only reads on "substantially free of nitrogen".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loboda et al. (US 6,159,871), as applied to claim 1 above, and further in view of Lagendijk (US 5,028,566).

Loboda teaches the limitations of claim 1, as shown above, but is silent to the teaching of using tetramethylcyclotetrasiloxane (TMCTS) as the precursor. However, Lagendijk teaches using TMCTS as a precursor provides high conformity with a low deposition temperature (column 5, lines 39-45). Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use TMTCTS in the process taught by Loboda. By doing so, one would reap the benefits of high conformity with a low deposition temperature.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4, 6, and 7 of U.S. Patent

No. 6,147,009. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the US patent read on the claims of the present invention. The claims of the patent contain additional limitations such as the film comprising 4 to 45 percent carbon. However, to broaden the claims would have been obvious. Additionally, although the claims of the patent are silent to the dielectric constant, this is an inherent quality of the deposited film.

Response to Arguments

Applicant argues that since Grill teaches an embodiment that uses nitrogen, that the limitation of "substantially free of nitrogen" is not taught. This is not found persuasive. Although some embodiments may use nitrogen, the reference anticipates an embodiment that teaches using only oxygen as the oxidizer source, by teaching "at least one member selected from hydrogen, oxygen...". This embodiment reads on "substantially free of nitrogen".

Applicant argues that since Loboda teaches an embodiment that uses nitrogen, that the limitation of "substantially free of nitrogen" is not taught. This is not found persuasive. Although some embodiments may use nitrogen, the reference anticipates an embodiment that teaches using only oxygen as the oxidizer source, by teaching ozone and oxygen as oxygen sources. This embodiment reads on "substantially free of nitrogen".

Applicant argues that the amendments to the claims overcome the rejections based on Towle (US 6,610,362). Examiner agrees and the rejections based on Towle have been withdrawn accordingly.

Applicant argues that the double patenting rejection is moot in view of the terminal disclaimer filed. This is not found persuasive, as the terminal disclaimer has not been accepted, for reasons indicated above. Specifically, the attorney that signed the disclaimer is not of record in the case.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck, can be reached at (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

EBF

TIMOTHY MEEKS
PRIMARY EXAMINER